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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/806,174

03/23/2004

Takamitsu Kawai

119212

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25944

7590

08/09/2006

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EXAMINER

NICHOLSON III, LESLIE AUGUST

ART UNIT

PAPER NUMBER

3651

DATE MAILED: 08/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/806,174	KAWAI, TAKAMITSU	
	<b>Examiner</b>	<b>Art Unit</b>	
	Leslie A. Nicholson III	3651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 2,8,9 and 16-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-7,10-15,20 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Arguments and Amendments***

1. Due to Applicant's arguments filed 7/6/2006, the Examiner hereby agrees to withdraw the Finality of the Action filed 2/27/2006.

Due to Applicant's amendments, all objections to the drawings, specification, and claim 6 are hereby withdrawn.

Applicant's arguments with respect to claim 1-19 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1,3,5,6,10,11,20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lightner USP 6,305,684 in view of Umeda JP 09086749 A and Matsumoto USP 6,712,463.

Lightner discloses a similar feeding device comprising:

- A drive roller (36) having an annular recess formed in an outer circumferential surface thereof (fig.7)

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- A roller (34) rotatably held and positioned relative to said drive roller such that a radially outer end portion of said driven roller is positioned within said annular recess of said drive roller so that said radially outer end portion of said roller (34) overlaps with a radially outer end portion of said drive roller (fig.7)
- An overlap-amount limiter (73) that is unmovable by rotation of said drive roller, said overlap-amount limiter including a contact portion which is positioned within said annular recess and which is, during absence of the recording medium between said drive roller and said roller (34), held in contact at a surface thereof with said radially outer end portion of said roller (34) (fig.7,9) C10/L55-65) wherein said overlap-amount limiter is provided by a member that is separated by said drive roller
- A plurality of each of the preceding
- Wherein said overlap-amount limiter is provided by a member that is separated by said drive roller (see figures)

Lightner does not expressly disclose a biaser, said biaser including a flexible shaft that biases said roller (34) toward said drive roller wherein said driven roller is displaceable at least in a direction away from said drive roller, so that the recording medium is fed to pass between said drive roller and said roller (34), with the recording medium being gripped by said radially outer end portion of said roller (34) and said radially outer end portion of said drive roller wherein said roller (34) is forced in said direction away from said drive roller against a biasing force generated by said biaser, nor does Lightner disclose said roller (34) including a toothed radially outer end portion

having a plurality of radially-extending projections, or said roller (34) being that of a driven roller.

Matsumoto teaches said roller being that of a driven roller (9) (fig.2,3) for the purpose of requiring fewer parts to convey the sheet just as effectively.

At the time of invention it would have been obvious to one having ordinary skill in the art to modify said roller to be that of a driven roller, as taught by Matsumoto, in the device of Lightner, for the purpose of requiring fewer parts to convey the sheet just as effectively.

Umeda teaches a biaser (28) (and a plurality of such), said biaser including a flexible shaft that biases said driven roller toward said drive roller wherein said driven roller is displaceable at least in a direction away from said drive roller, so that the recording medium is fed to pass between said drive roller and said driven roller, with the recording medium being gripped by said radially outer end portion of said driven roller and said radially outer end portion of said drive roller wherein said driven roller is forced in said direction away from said drive roller against a biasing force generated by said biaser for the purpose of allowing a number of sheets to pass between the drive and driven roller.

At the time of invention it would have been obvious to one having ordinary skill in the art to employ a biaser, said biaser including a flexible shaft that biases said driven roller toward said drive roller wherein said driven roller is displaceable at least in a direction away from said drive roller, so that the recording medium is fed to pass between said drive roller and said driven roller, with the recording medium being

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gripped by said radially outer end portion of said driven roller and said radially outer end portion of said drive roller wherein said driven roller is forced in said direction away from said drive roller against a biasing force generated by said biaser, as taught by Umeda, in the device of Lightner, for the purpose of allowing a number of sheets to pass between the drive and driven roller.

Lightner further discloses the device wherein said contact portion of said overlap-amount limiter is formed of a material which is harder than a material forming said driven roller (C10/L55-56, C11/L41-43)

Regarding claim 20, Umeda teaches said driven roller including a toothed radially outer end portion which has a plurality of radially-extending projections (16b) for the purpose of providing an effective contact between the drive and driven roller.

At the time of invention it would have been obvious to one having ordinary skill in the art to employ the driven roller with a toothed radially outer end portion which has a plurality of radially-extending projections, as taught by Umeda, in the device of Lightner, for the purpose of providing an effective contact between the drive and driven roller.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lightner USP 6,305,684 in view of Umeda JP 09086749 A and Matsumoto USP 6,712,463 further in view of Rider USP 5,653,439.

Lightner discloses all the limitations of the claim, but does not expressly disclose the drive roller disposed on a downstream side, as viewed in said feed direction, of a recording portion.

Rider teaches the drive roller disposed on a downstream side, as viewed in said feed direction, of a recording portion (fig.1,5) for the purpose of discharging sheets onto the discharge tray.

At the time of invention it would have been obvious to one having ordinary skill in the art to have the drive roller disposed on a downstream side, as viewed in said feed direction, of a recording portion, as taught by Rider, in the device of Lightner, for the purpose of discharging sheets onto the discharge tray.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lightner USP 6,305,684 in view of Umeda JP 09086749 A and Matsumoto USP 6,712,463 further in view of Bekki USP 5,606,357.

Lightner discloses all the limitations of the claim, but does not expressly disclose the feeding device wherein the driven roller is formed of a resin.

Bekki teaches a driven roller formed of a resin (C4/L24-27) for the purpose of extending the wear-life of the driven roller.

At the time of invention it would have been obvious to one having ordinary skill in the art to form a driven roller of a resin, as taught by Bekki, in the device of Lightner, for the purpose of extending the wear-life of the driven roller.

6. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lightner USP 6,305,684 in view of Umeda JP 09086749 A and Matsumoto USP 6,712,463 further in view of Uchikata USP 5,961,234.

Lightner discloses all the limitations of the claim, but does not expressly disclose a recording portion which records an image on a recording medium and which is disposed on an upstream side of said feeding device as viewed in said feed direction, a platen which is opposed to said recording portion and supports the recording medium, and a media exit portion through which the recording medium exits from said apparatus after the image is recorded on the recording medium by said recording portion.

Uchikata teaches a recording portion (7) which records an image on a recording medium (S) and which is disposed on an upstream side of said feeding device as viewed in said feed direction, a platen (34) which is opposed to said recording portion and supports the recording medium, and a media exit portion through which the recording medium exits from said apparatus after the image is recorded on the recording medium by said recording portion (C6/L7L11) (fig.3) for the purpose of completing the system of an inkjet recording apparatus.

At the time of invention it would have been obvious to one having ordinary skill in the art to employ a recording portion which records an image on a recording medium and which is disposed on an upstream side of said feeding device as viewed in said feed direction, a platen which is opposed to said recording portion and supports the recording medium, and a media exit portion through which the recording medium exits from said apparatus after the image is recorded on the recording medium by said recording portion, as taught by Uchikata, in the device of Ahn, for the purpose of completing the system of an inkjet recording apparatus.



Regarding claim 13, Lightner further discloses the overlap-amount limiter including a tongue member extending in said feed direction and which has a proximal end portion positioned on an upstream side of said driven roller as viewed in said feed direction (see figures).

7. Claims 14 and 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lightner USP 6,305,684 in view of Umeda JP 09086749 A, Matsumoto USP 6,712,463, and Uchikata USP 5,961,234 further in view of Asano USP 5,291,224.

Lightner discloses all the limitations of the claim, but does not expressly disclose the tongue member extending from the platen or the tongue member integrally formed with the platen.

Asano teaches the tongue member extending from the platen (7) (fig.1,8,9) and the tongue member formed integrally with the platen for the purpose of providing a smooth and space-saving guide from the platen to the feeding device.

At the time of invention it would have been obvious to one having ordinary skill in the art to have the tongue member extending from the platen and the tongue member formed integrally with the platen, as taught by Asano, in the device of Lightner, for the purpose of providing a smooth and space-saving guide from the platen to the feeding device.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leslie A. Nicholson III whose telephone number is 571-272-5487. The examiner can normally be reached on M-F, 8:30 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Crawford can be reached on 571-272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

L.N.  
8/3/2006

  
GENE P. CRAWFORD  
SUPERVISORY PATENT EXAMINER